第３講　長文問題演習③

ポイント

❶ 因果の発見
❷ 対比の発見
❸ 抽象の発見

Read the following text and answer the questions below.

About 10 million hectares of forests are lost in the tropics every year. This deforestation is threatening biodiversity more than any other type of environmental destruction. It also contributes to climate change. It is the same as around 4.5 gigatons of annual CO_2 emissions.

Tropical forests are home to countless plants and animals, and they provide water, energy, and food to 350,000,000 people. Many such people are poor, and the forests are an important life support system for them.

Scientific research studies have shown that nowadays the people and companies that (1)commit the deforestation are mainly large-scale agricultural corporations rather than small land-holders, as in the past. And they have shown that the food produced on deforested land is more and more being sold in foreign countries as export commodities instead of being sold in domestic markets.

NOTE

With the recognition of these developments, many people have become interested in the question of how to stop tropical deforestation by targeting the (2)<u>demand</u> side rather than the supply side. In other words, many people and companies are focusing on how to encourage consumers to buy less of these “forest-risk commodities” instead of focusing on making laws to outlaw the sale of these commodities. Such companies include large multinational corporations such as Disney, McDonald’s, Nestle, and IKEA, who have promised not to buy things produced from land whose forests have been cleared.

To help people do this, Martin Persson, Sabine Henders, and Thomas Kastner have done research on who around the world is buying the forest-risk commodities that lead to forest destruction in tropical countries. In an attempt to (3)<u>map</u> the links between deforestation, production, and trade, they studied four of the main forest-risk commodities — beef, soybeans, palm oil, and wood products — in seven high-deforestation countries — Argentina, Bolivia, Brazil, Paraguay, Indonesia, Malaysia, and Papua New Guinea — during the period from 2000 to 2011.

NOTE

They found that beef production was the main cause of forest loss. For example, in 2011, 60 percent of the deforestation in Latin America was caused by beef production. This beef production also resulted in a large overall increase in carbon (4)emissions due to the loss of the carbon-absorbing forest. A little more than 50 percent of the carbon emissions caused by the deforestation was caused by clearing forests in order to produce beef. The second most important cause of forest loss was soybeans, but many of the forests lost to soybeans were not rainforests, which are rich in carbon. They were other forest types. This helps explain why the second largest cause of carbon emissions was palm oil plantations rather than farms for soybeans.

Although most of the beef produced in Argentina, Brazil, and Bolivia in 2011 went to domestic markets, the amount of exported beef was also quite large. In the case of soybeans, palm oil, and wood products, 60 percent of these products were exported to other countries. The EU, China, and other Asian countries were major importers of these four products.

NOTE

There is a risk that even if the governments of these high-deforestation countries have policies that conserve and protect forests, the growing global demand for land and agricultural commodity supply will be so great that these governments will not be able to stop these products from being produced on deforested land and exported. Also, even if national policies are effective, deforestation may shift to other countries where the laws protecting forests are less (5)strict. Therefore, not only supply-side policies are necessary but also demand-side policies and approaches.

Demand-side approaches, however, are not easy. They are as difficult as supply-side approaches. For example, most of the commodity production happens on land that has not been cleared recently. According to this study by Persson, Henders, and Kastner, 85 percent of beef, soybean, and palm oil production occurs on land that was cleared more than 10 years ago.

Persson, Henders, and Kastner believe that all markets around the world must be covered by zero-deforestation rules. Until the future day when all markets are controlled and regulated by deforestation rules and standards, the products from recently cleared land will continue to be sold in markets without such rules and standards. After studying these four forest-risk commodities and thinking about the causes of the deforestation, the three authors conclude that both supply-side and demand-side policies are necessary in order for us to keep tropical forests healthy.

【出典（一部改変）：http://www.focali.se/】

（名古屋工業大学）

NOTE

1 **Choose the word or phrase from ① – ④ which is closest in meaning to** (1) – (5).

(1) ① inspect ② do ③ adjust ④ regulate

(2) ① customers wanting to buy ② safe and healthy commodities

③ company purchases ④ usual transactions

(3) ① ignore ② spread out ③ identify ④ protect

(4) ① effect ② result ③ structure ④ output

(5) ① loose ② severe ③ permitting ④ influential

2 **Choose the best answer for each question**.

(1) According to the text, what causes the greatest loss of species diversity?

① Acidification of water

② Putting many gigatons of CO_2 into the earth's air

③ Removing all the trees from certain areas

④ Climate change

(2) Which of the following benefits of tropical forests is NOT mentioned in the text?

① Tropical forests reduce CO_2.

② Tropical forests give homes to plants and animals.

③ Tropical forests support the lives of many human beings.

④ Tropical forests keep rivers clean.

(3) The production of which agricultural product causes the greatest amount of deforestation?

① Palm oil　② Beef　③ Wood products　④ Soybeans

(4) Which of the following statements is true?

① Palm oil production is the second most important cause of forest loss.

② The study covers the period of agricultural production from 2000 to 2012.

③ North America is the greatest consumer of beef produced in the tropical rainforests of the seven high-deforestation countries.

④ The production of wood products is neither the largest nor the second largest cause of carbon emissions.

(5) Which is the main topic of this text?

① Agricultural commodity consumption and trade causing tropical deforestation

② The consumption of tropical forest food in the EU and China

③ Developing techniques for clearing tropical forests

④ The history of supply-side and demand-side government policies managing agricultural products

背景知識　森林伐採がもたらすもの

●森林の役割

・**二酸化炭素の固定能力**。森林の植物が空気中の二酸化炭素を留める力。
・**大気浄化能力**。光合成により，きれいな空気を供給する役割。
・**保水能力**。清浄で栄養たっぷりの水を貯える力。
・**生態系の維持能力**。森林で生きる動植物や昆虫の住処を与える役割。

●森林伐採の問題点

・**地球温暖化** ＝ 大気中の**二酸化炭素が増えすぎたこと**が主な原因。
・**二酸化炭素の増加原因** ＝ **化石燃料**（石油，石炭など）**の燃焼時**に発生。光合成で二酸化炭素を減らす**森林が減少している**ことも原因。

●森林伐採の原因

・**土地利用の転換**。森林を伐採して農地，牧場，レジャー施設等への転換。
・**燃料用木材の過剰な採取**。
・**焼き畑農業，森林火災**。落雷，たき火や放火が原因。
・**畜産利用**。森林を伐採して，草地に変えて，牛の放牧を行う畜産が原因。

NOTE

高3 ハイレベル英語 リーディング<長文演習編>
第３講　解答

解答

１．

(1)　②　　(2)　①　　(3)　③　　(4)　④　　(5)　②

２．

(1)　③　　(2)　④　　(3)　②　　(4)　④　　(5)　①

問題と選択肢の訳

１．(1)～(5)の意味に最も近い語句または言い回しを①～④から選びなさい。

(1)　～を実行する

① ～を調査する

② ～を行う

③ ～を調整する

④ ～を規制する

(2)　需要

① 購入希望の顧客

② 安全で健康によい商品

③ 企業購買

④ 通常取引

(3)　～をはっきり描く

① ～を無視する

② ～を広げる

③ ～を識別する

④ ～を保護する

(4)　排出

① 効果

② 結果

③ 構成
④ 出力

(5)　厳格な
① 緩い
② 厳しい
③ 容認している
④ 影響力が大きい

２．各設問に対し最も適切な答えを選びなさい。

(1)　本文によると，種の多様性の喪失の最大の原因は何か答えなさい。
① 水の酸性化
② 地球の大気中に何十億トンもの二酸化炭素を放出すること
③ 特定の地域からすべての木を取り除くこと
④ 気候変動

(2)　次の中から，本文中で言及されていない熱帯林の利点を答えなさい。
① 熱帯林が二酸化炭素を削減する。
② 熱帯林が動植物の生息圏である。
③ 熱帯林が多くの人類の生活を助けている。
④ 熱帯林が河川をきれいな状態に保っている。

(3)　どの農産物の生産が森林破壊の最大の原因となっているか答えなさい。
① ヤシ油
② 牛肉
③ 木材製品
④ 大豆

(4)　次の説明のうち，正しいものを選びなさい。
① ヤシ油生産は森林喪失の二番目に重要な原因だ。
② 調査は 2000 年から 2012 年までの農業生産を対象としている。
③ 北米は，森林伐採率の高い七カ国の熱帯雨林で生産された牛肉の最大の消費国だ。
④ 木材製品の生産は，炭素排出の最大の原因でも，第二の原因でもない。

（5） 本文の主題を選びなさい。

① 熱帯の森林破壊を引き起こす農産物の消費と貿易

② EU と中国における熱帯林食物の消費

③ 熱帯林伐採技術の開発

④ 農産物を管理する供給サイドと需要サイドの政府政策の歴史

本文の全訳

約 1,000 万ヘクタールの森林が熱帯地方で毎年失われている。この森林伐採は，他のいかなる種類の環境破壊よりも，生物学的多様性を脅かしている。森林伐採は気候変動の原因にもなっている。それは年間およそ 45 億トンの二酸化炭素の排出に等しい。

熱帯林は無数の動植物の住みかであり，3 億 5,000 万人もの人々に水，エネルギー，そして食料を供給している。そのような人の多くは貧しく，森林は彼らにとって重要な生命維持装置である。

科学的な研究調査によって，現在，森林伐採を実行している人々そして企業が，昔のような小さな土地の所有者たちよりむしろ，主に大規模な農業法人であることがわかっている。そしてそれらによって，森林伐採が行われた土地で生産される食料が，国内の市場で販売されずに輸出品として外国でますます販売されているとわかっている。

こうした開発を認識するにつれて，多くの人が供給サイドよりむしろ，需要サイドを対象として熱帯地方の森林伐採をいかに阻止するかという問題に関心を持つようになった。すなわち，多くの人々そして企業は，これらの「森林リスク商品」の販売を非合法とする法律を作ることに集中するのではなく，消費者たちがこれらの商品の購入量を少なくするように促す方法に集中している。このような企業には，ディズニー，マクドナルド，ネスレ，そしてイケアのような大きな多国籍企業があり，それらの企業は森林が伐採された土地で生産されたものを購入しないと既に約束している。

人々がこれを行うことを助けるために，マルチン・ペールソン，ザビーネ・ヘンデルスそしてトマス・カストナーは，世界中で誰が熱帯諸国における森林破壊を引き起こす，森林リスク商品を購入しているかに関する調査を行った。森林伐採，生産そして貿易の間の関連を調査しようとして，彼らは 4 つの主な森林リスク商品である牛肉，大豆，ヤシ油，そして木材製品について，森林伐採が多く行われている 7 か国のアルゼンチン，ボリビア，ブラジル，パラグアイ，インドネシア，マレーシアそしてパプア・ニューギニアで，2000 年から 2011 年までの間調査を行った。

彼らは，牛肉の生産が森林喪失の主要な原因であることに気付いた。例えば 2011

年には，ラテンアメリカの森林伐採の 60％は，牛肉の生産のせいで引き起こされた。この牛肉の生産が原因で，炭素を吸収する森林の喪失による炭素排出総量が大幅に増加した。森林伐採が原因の炭素排出量の 50％強が，牛肉生産のために森林を伐採したことが原因だった。森林喪失の二番目に重要な原因は大豆であったが，大豆のために失われた森林の多くは炭素が豊富な雨林ではない。それらは別種の森林だった。このことは，二番目に大きな炭素排出の原因が大豆の農場というよりむしろ，ヤシ油のプランテーションだとする理由の説明の助けとなる。

アルゼンチン，ブラジルそしてボリビアで 2011 年に生産された牛肉のほとんどが国内市場向けだったが，輸出された牛肉の量もかなり多かった。大豆，ヤシ油，そして木材製品の場合には，その 60％が他の諸国に輸出された。EU，中国，そして他のアジア諸国が，これら 4 つの製品の主要な輸入国だった。

たとえ，これら森林伐採が多く行われている国の政府が森林を保存し，保護する政策を持ったとしても，土地と農産物供給に対する世界中で増加する需要があまりに大きいので，これらの政府は，こうした生産物が森林伐採された土地で生産され，輸出されるのを防ぐことができないだろうというリスクがある。また，たとえ国家の政策が効果的であったとしても，森林伐採は森林を守る法律がより厳しくない他の諸国に移動するかもしれない。それゆえ，供給サイドの政策だけでなく，需要サイドの政策と取り組みも必要だ。

しかしながら，需要サイドの取り組みは簡単ではない。供給サイドの取り組みと同じくらい難しいものだ。例えば，農業商品生産のほとんどが，最近裸にされたわけではない土地で起きている。ペールソン，ヘンデルスそしてカストナーによるこの調査では，牛肉，大豆そしてヤシ油の生産の 85％は，10 年以上前に裸にされた土地で行われているのだ。

ペールソン，ヘンデルスそしてカストナーは，世界中のすべての市場に，森林伐採ゼロ規則が適用されなければならないと強く考えている。すべての市場が森林伐採の規則と基準によって管理され規制されるいつか訪れる日まで，最近裸にされた土地で生産された品物が，そのような規則と基準がない市場で販売され続けるだろう。これら 4 つの森林リスク商品を調査し，森林伐採の原因について考慮した後に，3 人の著者たちは，供給サイドおよび需要サイド両方の政策が，熱帯の森林を私たちが健康に保つために必要だと結論を下している。

第３講　重要語彙リスト

＊一つ一つ何度も繰り返して，
覚えてください

1	hectare	ヘクタール
2	the tropics	熱帯地方
3	deforestation	森林破壊
4	biodiversity	生物多様性
5	environmental destruction	環境破壊
6	climate change	気候変動
7	gigaton	ギガ（＝ 10 億）トン
8	annual emissions	年間排出量
9	home	生息地
10	countless	数えきれないほどの
11	provide	～を供給する
12	life support system	生命維持装置
13	large-scale	大規模の
14	agricultural corporation	農業法人
15	land-holder	地主
16	export commodities	輸出品
17	domestic	国内向けの
18	recognition	認識
19	encourage	～を奨励する
20	forest-risk	森林を減少させるリスクがある
21	outlaw	法的に禁止する
22	multinational	多国籍の
23	promise not to	～しないと約束する
24	in an attempt to	～しようと企て
25	map	～をはっきり描く
26	palm oil	ヤシ油
27	high-deforestation	森林伐採が多く行われている
28	forest loss	森林消失
29	overall	全体的な
30	carbon-absorbing	炭素を吸収する
31	clearing forest	森林開拓
32	rainforest	熱帯雨林
33	plantation	大農園
34	importer	輸入国
35	conserve	～を保全する
36	shift	移る
37	approach	働きかけ
38	clear land	土地を裸地にする
39	be covered by	～の適用を受けている
40	zero-deforestation	森林伐採を一切行わない

第３講　音読用白文　①②③④⑤⑥⑦⑧⑨⑩

About 10 million hectares of forests are lost in the tropics every year. This deforestation is threatening biodiversity more than any other type of environmental destruction. It also contributes to climate change. It is the same as around 4.5 gigatons of annual CO_2 emissions.

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